IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	Atty. Docket: NL 021492
JOHANNUS WILHELMUS WEEKAMP ET AL.	Group Art Unit: 2823
Serial No. 10/539,314	Examiner: SINGAL, A.K.
Filed: JUNE 15, 2005	Confirmation No. 2479

Title: ELECTRONIC DEVICE HAVING IMPROVED ISOLATION AND METHOD OF MANUFACTURING SAME (As Amended)

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CORRECTED APPEAL BRIEF

Sir:

Appellants herewith respectfully presents a Grounds of Rejection To Be Reviewed on Appeal responsive to the Notice of Non-Compliant Appeal Brief mailed on February 3, 2009 as follows:

Please delete the previously submitted Grounds of Rejection To Be Reviewed on Appeal section and the Argument section, and substitute the following Grounds of Rejection To Be Reviewed on Appeal section and the Argument section included herein.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-3 and 5-7 of U.S. Patent Application Serial No. 10/539,314 are unpatentable under 35 U.S.C. §103(a) over U.S. Patent No. 6,324,072 (Lorentz) in view of U.S. Patent Application Publication No. 2002/0117743 (Nakatani).

Whether claim 4 of U.S. Patent Application Serial No. 10/539,314 is unpatentable under 35 U.S.C. §103(a) over Lorentz in view of Nakatani and U.S. Patent No. 4,897,327 (Dubin).

Whether claims 8-9 of U.S. Patent Application Serial No. 10/539,314 are unpatentable under 35 U.S.C. §103(a) over Lorentz in view of Nakatani.

Whether claim 10 of U.S. Patent Application Serial No. 10/539,314 is unpatentable under 35 U.S.C. §103(a) over Lorentz in view of Nakatani and Dubin.

ARGUMENT

Appellants respectfully request the Board to address the patentability of independent claims 1 and 8, and further claims 2-7 and 9-10 as depending from independent claims 1 and 8, based on the requirements of independent claims 1 and 8. This position is provided for the specific and stated purpose of simplifying the current issues on appeal. However, Appellants herein specifically reserve the right to argue and address the patentability of claims 2-7 and 9-10 at a later date should the separately patentable subject matter of claims 2-7 and 9-10 later become an issue. Accordingly, this limitation of the subject matter presented for appeal herein, specifically limited to discussions of the patentability of independent claims 1 and 8 is not intended as a waiver of Appellants' right to argue the patentability of the further claims and claim elements at that later time.

Claims 1-3 and 5-7 are said to be unpatentable over Lorentz and Nakatani.

Lorentz is directed to a micro-electronic component of sandwich construction. As correctly noted on page 4 of the Final

Office Action, Lorentz does not teach or suggest encapsulating and separating the assembly of the substrate. Nakatani is cited in an attempt to remedy the deficiencies in Lorentz.

Nakatani is directed to a component built-in module. It is alleged, at the bottom of page 4 of the Final Office Action, that FIG 7H of Nakatani shows providing a passivating material (from the second side of the semiconductor element) **through the foil**, which passivating material forms an **encapsulation** of the elements, as recited in independent claim 1 (as well as recited in independent claim 8). Applicants strongly disagree.

Nakatani discloses forming various layers over each other. In particular, holes are formed in an uncured sheet of thermosetting resin 704 to form vias 705 which are filled with conductive paste and sandwiched between release carriers 700 including wiring pattern 701, a semiconductor 702 and chip component 702. The resin sheet 704 is cured to form a component built-in core layer 706. Other resin sheets 707, including vias 708 filled with conductive paste and release carriers 710 with components 709, are provided on both sided of the component built-in core layer 706 as shown in FIG 7H where, after heating and pressing, the release carriers 710 are

peeled off. (See paragraphs [0067-0073])

There is simply no teaching or suggestion in Lorentz, Nakatani, and combination thereof, of the present invention as recited in independent claim 1 (and similarly recited in independent claim 8) which recites (illustrative emphasis provided):

> providing a passivating material from the second side of the semiconductor element **through the foil**, which passivating material **forms an encapsulation of the elements**.

In Nakatani, at best, the only thing that is provided through something is the conductive paste provided in, or arguendo through, the vias 705, 708 of the resin sheets 704, 707. The Nakatani conductive paste in the vias 705, 708 does not form any encapsulation of the elements. Rather the Nakatani conductive paste fills the vias 705, 708, and provides electric contact or conductive paths. That is, the Nakatani vias 705, 708 filled with the conductive paste does NOT provide isolation; rather the Nakatani conductive paste provides electric contact.

The Nakatani conductive paste is diametrically opposite the passivating material, as recited in independent claim 1 (as well as

recited in independent claims 1 and 8), where the passivating material forms an encapsulation of the elements thus isolating and protecting the inventive electronic device, where the passivating or isolating material is provided through the foil forms an encapsulation of the elements.

Illustratively, the passivating or isolating material for the encapsulation may "include glass epoxides, acrylates, polyimides but also sol-gel materials that can be cured to glass," as recited on page 3, lines 23-24 of the present application. Thus, the Nakatani **conductive** paste teaches away from the "passivating material [that] forms an encapsulation of the elements," where the "passivating material [is provided] from the second side of the semiconductor element through the foil," as recited in independent claim 1 (and similarly recited in independent claim 8).

Accordingly, it is respectfully submitted that independent claim 1 is allowable, and allowance thereof is respectfully requested. In addition, it is respectfully submitted that claims 2-3 and 5-7 should also be allowed at least based on their dependence from independent claim 1.

Claim 4 is said to be unpatentable over Lorentz, Nakatani and Dubin.

It is respectfully submitted that claim 4 should be allowed at least based on its dependence from independent claim 1.

Claims 8-9 are said to be unpatentable over Lorentz and Nakatani.

It is respectfully submitted that independent claim 8 should be allowed for similar reasons discussed in connection with independent claim 1. In particular, there is no teaching or suggestion in Lorentz, Nakatani, and combination thereof, of the present invention as recited in independent claim 8 which recites (illustrative emphasis provided):

> said elements and said second patterned layer being at least substantially **encapsulated by an encapsulation of passivating material** provided from said second side of said electronic device **through said second patterned layer**.

Further, it is respectfully submitted that claim 9 should be allowed at least based on its dependence from independent claim 8.

Claim 10 is said to be unpatentable over Lorentz, Nakatani and Dubin.

It is respectfully submitted that claim 10 should be allowed at least based on its dependence from independent claim 8.

In addition, Appellants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Appellants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

CONCLUSION

In view of the above, it is respectfully submitted that the Brief on Appeal is compliant and consideration on the merits is respectfully requested.

Respectfully submitted,

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